

## **Equipment Maintenance and Storage Areas**

### **Description**

The maintenance, repair, cleaning, and storage of construction machinery, vehicles, and equipment should be confined to areas specifically designed and designated for that purpose. This practice includes both open and covered equipment maintenance and storage areas, and emphasizes the importance of controlling runoff from both kinds of storage areas. It is applicable to construction sites as well as existing permanent storage facilities.

### **Other Terms Used to Describe**

Service Area  
Shop Area

### **Pollutants Controlled and Impacts**

Equipment storage areas which properly control runoff will prevent oil, grease, solvents, hydraulic fluids, sediment, wash water, and other pollutants from being carried off the area and entering surface waters. Proper use of this practice will also prevent pollutants from filtering into the ground.

### **Application**

#### **Land Use**

This BMP applies to all land uses.

#### **Soil/Topography/Climate**

Where possible, maintenance/storage areas should be placed on flat areas to prevent surface runoff from entering or leaving the area.

#### **When to Apply**

This practice should be implemented at all existing equipment maintenance and storage areas, and whenever construction will be ongoing long enough that construction equipment will need to be stored, serviced, maintained, or repaired on a construction site. Appropriate equipment maintenance/storage sites should be identified before any actual construction begins.

#### **Where to Apply**

Apply anywhere equipment is maintained and/or stored.

### **Relationship With Other BMPs**

Where possible, the identification of an appropriate maintenance/storage area should be done before any construction is done on the site. Diversions should be considered to keep runoff from entering the storage area. Pesticides stored and used in the area should be handled, stored and disposed of according to specifications in the Pesticide Management BMP. Smaller quantities of hazardous wastes (i.e. quantities of approximately 1 gallon or less) should be disposed of following the specifications in the Household Hazardous Waste Disposal BMP. Larger quantities of hazardous

waste should be disposed of by consulting the MDNR, Waste Management Division at 517-373-2730.

### **Specifications**

#### **Planning Considerations for New Areas:**

Determine site selection based on the following considerations.

If equipment is to be maintained and stored in an open area (i.e. **temporary storage**):

- The site should not be within the drip line of trees.
- The site should not be within 100 feet of a watercourse or wetland. Runoff should be diverted away from watercourses and wetlands.

If equipment is to be maintained and stored in a **permanent structure** (i.e. building):

- The building should not be located within 100 feet of a watercourse
- When possible, the building should not be constructed on or within 100 feet of a wetland.

Under no circumstances should buildings or equipment be located in floodplains, stream beds, or the channel of any watercourse.

#### **General Considerations for All Equipment Maintenance/Storage Areas:**

1. Runoff from equipment maintenance/storage areas should be directed to stabilized outlets designed to assimilate the volume and type of pollutants discharged to them. See the Stabilized Outlets BMP.
2. Heavy equipment should be well-maintained to prevent leaks.
3. Vehicles and other equipment should *not* be washed at locations where the runoff will flow directly into a watercourse or storm sewer.
4. Store, cover and isolate construction materials, including topsoil and chemicals, to prevent runoff of pollutants and contamination of groundwater, following the design guidance below.
5. A spill response plan should be developed which includes the procedures which will be taken in the case of a spill. This is discussed further in "Proper Storage, Use and Disposal of Chemicals," below.
6. A waste management plan should be developed. Empty canisters, cans or other chemical containers (i.e. from hydraulic fluids, etc.), scrap wood, scrap metal, and all other waste materials are to be disposed of daily or kept in sealed waste containers until they can be disposed of off-site in a landfill. Waste materials are *not* to be buried on-site.
7. Specific areas should also be designated and maintained for employee parking.

**Equipment Maintenance and Storage in Structures (buildings):**

1. All floor drains which discharge to storm sewers should be sealed/plugged. New floor drains should discharge to a sanitary sewer.
2. All floors should be constructed of cement or other impervious materials to prevent contaminants from leaching into the soils or groundwater.
3. Equipment wash areas should discharge into a sanitary sewer line. Depending on the amount of oil, grease and other pollutants, pre-treatment of wastewater may be needed before it enters the sanitary sewer.
4. Trucks and other equipment with large quantities of mud should be washed outside on designated wash areas, so as not to clog sanitary sewer lines.

**Equipment Maintenance and Storage in Maintenance in Open Areas:**

1. Ideally, all maintenance should be done on impervious areas surrounded with impervious berms. Where this is not possible, use pads designed to contain the pollutants which may leak or spill during maintenance operations. Impervious pads are particularly important on sandy and other coarse soils where spilled materials can easily leach into the groundwater.
2. Wash areas should be constructed out of 2-3" stone or other approved material, with a minimum 6-inch base. They should be underlain with geotextile materials, and protected using berms or Diversions to prevent the runoff water from leaving the site. See the Appendices for manufacturers of geotextile materials.
3. Equipment should never be stored within the drip line of trees.
4. Topsoil should be stored following specifications in the Spoil Piles BMP.
5. Follow the guidance below for the "Proper Storage, Use and Disposal of Chemicals."

**Proper Storage, Use and Disposal of Chemicals:**

1. Follow all federal, state and local laws regarding the storage of hazardous materials. In general:
  - All hazardous chemicals should be stored in sealed containers. Secondary containment should be incorporated into the design of the maintenance/storage facility to contain spills from all hazardous materials.
  - Pesticides should be stored according to the guidelines in the Pesticide Management BMP.
  - Keep labels on all products so that they are readable. Do not use a product without a label.
  - Maintain records of the use and application of all products stored on site.
  - Maintain proper ventilation. Post "no smoking" and other signs to warn of potential dangers. Keep the area locked.

2. Develop a spill response plan. This should include the steps that will be taken to contain and cleanup spills. All persons working with chemicals should be familiar with the spill response plan. For spills of hazardous materials which cannot be contained on-site, or when there is a known or potential impact to surface or ground water or soils, contact the Pollution Emergency Alert System (PEAS) line at 1-800-292-4706.
3. Absorbent materials such as hay bales, cat litter and absorbent pads should be kept on-site to prevent the migration of pollutants which are spilled on imperious areas.
4. Dispose of small quantities of material (i.e. less than 1 gallon) based on the type of pollutant absorbed:

- Dispose of pesticides following specifications in the Pesticide Management BMP; and

- Follow specifications in the Household Hazardous Waste Disposal BMP for small quantities of hazardous wastes (1 gallon or less);

For other hazardous wastes, or wastes in excess of 1 gallon, contact the MDNR, Waste Management Division at 517-373-2843 for additional information.

5. Contact the MDNR, Environmental Response Division at 517-373-4823 for information on the Right-to-Know Law and for information on underground storage tanks.

### **Maintenance**

Outside equipment/maintenance storage areas should be inspected daily to ensure equipment isn't being stored within the drip line of trees and to ensure the vehicles and equipment aren't leaking. Also make sure waste materials are being properly disposed of. Periodic checks of the equipment wash area should also be done to ensure it is not failing. Additional stone may be needed to maintain the wash area.

Ongoing maintenance of structural equipment maintenance/storage areas should include periodic inspections of the structure to check for cracks in the floor, and for other structural flaws. In existing buildings, be sure to inspect the floor drains to make sure they are not discharging to storm drains.

### **Additional Considerations**

Draft revisions to Part 21 Rules of the Water Resources Commission (Act 245) will require construction permittees to provide facilities for containing any accidental losses of oil or other polluting substances, and comply with reporting procedures for on-land facilities under Part 5 rules. Approved equipment maintenance and storage areas must meet these Part 21 Rules.